

Cotton Fiber and Processing Test Results



CROP of

1978



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Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 November 3, 1978

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1978

Discussion of Test Results

The average Fibrograph 2.5% span length of short staple cotton tested from the Southwest through October 27 is considerably shorter from a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Cottons are less uniform and finer. Samples tested are stronger at zero gage strength tests but weaker at 1/8" gage tests from a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples show weaker yarn strength. Yarn appearance grades are higher. Imperfections are fewer. The average spinning potential is lower.

Medium staple samples tested from the Southeast are longer, and finer than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are lower. Yarns spun from these samples are stronger, but have lower appearance grades. Yarn imperfections are lower. The spinning potential is higher.

South Central medium staple samples are shorter and stronger at zero gage fiber strength tests than a year ago. Shirley Analyzer nonlint content is lower. Picker and card waste is higher than a year ago. Yarns spun from these samples show weaker strength and lower appearance grades. Yarn imperfections are lower. The spinning potential is lower.

Medium staple samples from the Southwest are shorter, less uniform and stronger at both zero and 1/8" gage strength tests. Both Shirley Analyzer and picker and card waste are higher than a year ago. Yarns spun from these samples show weaker yarn strength and lower appearance grades. The spinning potential yarn number is lower.

Average test results for all medium staple samples show fibers to be shorter, less uniform and stronger at zero fiber strength than a year ago at this stage of the harvest. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are weaker and lower appearance grades. Yarn imperfections are lower. The average spinning potential yarn number is lower.

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standards Section, Cotton Division, Agricultural Marketing Service, U.S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN. 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1977, USDA, AMS, Cotton Division, August 1978.

Staple group Area, and Crop year	Lots tested	Fiber test results					Processing test results					
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality		Spin. Potent.	
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex		Pct.
				Inches			Pct.	Rdg.			Mpsi	
		22s Carded Yarn										
Short Staple: Southwest	29	.98	46	4.2	90	22	3.3	5.6	99	106	13	- 1/ 45
1977	15	.92	45	4.1	93	21	4.0	7.0	93	117	7	(17) 37
1978												
Medium Staple Southeast	14	1.07	46	4.8	87	23	3.1	6.0	99	98	20	- 50
1977	10	1.10	46	4.6	87	23	2.9	5.7	109	96	12	(76) 58
1978												
South Central	71	1.11	45	4.6	86	23	3.6	6.1	106	97	22	- 58
1977	46	1.10	45	4.6	87	23	3.3	6.4	104	94	13	(55) 52
1978												
Southwest	36	1.09	46	4.3	85	22	3.2	5.6	105	93	17	- 57
1977	35	1.04	45	4.3	89	23	4.4	6.2	102	82	16	(84) 52
1978												
West	5	1.13	47	4.3	91	26	2.2	5.4	120	88	26	- 70
1977	1	1.05	46	4.9	92	25	1.6	4.8	95	100	11	(86) 44
1978												
U.S. Average	126	1.10	46	4.5	86	23	3.4	5.9	106	96	21	- 57
1977	92	1.08	45	4.5	88	23	3.7	6.2	104	90	14	(68) 53
1978												
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

3/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns												
No		Grade	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imperf'ns Neps/Yards		Spin. Potential			
				2.5% span	Unif		Zero	1/8" Gage		Pct	Pct	Gra	Yel		8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx	8s or 74 tx	22sor 27 tx				
				In	Pct	Rdg	Mpsi	G/tex		Pct	Pct	No	No		Pct	Lbs	Lbs	Pct	Pct	No	No	No		No		
32s																										
SOUTHWEST AREA																										
CENTRAL TEXAS																										
3		SLM	41	30	0.90	45	4.0	91	21	5.9	3.7	2	4	7.1	281	95	6.7	6.3	120	110	26	1/ (2) 8 (8) 39				
COMMERCE																										
2		MID	31	30	0.93	47	4.6	91	20	5.8	2.3	2	4	5.0	279	94	6.5	6.2	120	110	19	(2) 5 (6) 38				
KAUFMAN																										
2		SLM LT SP	42	30	0.95	47	5.1	95	23	5.1	4.1	3	4	7.8	280	93	6.4	5.5	120	110	33	(0) 7 (18) 37				

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978:

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns											
No	Grade & Code	Stple	32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S. A. Non- Lint		Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potent- ial		
				2.5% span	Unif.		Rdg	Mpsi		G/tex	Pct	In	Pct		Gr	Yel	No	No	Lbs	Pct	Lbs	Pct		22s or 27 tx	50s or 12 tx
SOUTHEAST AREA																									
ALABAMA																									
HARPERSVILLE																									
1	SLM	41	34	1.09	46	4.5	86	23	6.3	3.3	2	3	6.0	90 PERCENT	112	38	6.2	4.7	110	80	12	54	8	186	63
HUNTSVILLE																									
1	SLM	41	34	1.07	46	4.5	86	24	6.2	2.7	2	3	6.1	100 PERCENT	105	29	6.2	4.4	100	90	9	44	7	126	52
MADISON																									
1	SLM	41	33	1.11	46	5.2	84	24	6.3	2.7	3	4	4.9	95 PERCENT	110	37	6.4	4.7	110	90	10	66	8	182	58
MOUNDVILLE																									
1	SLM	41	35	1.12	45	4.7	92	25	5.0	2.0	2	4	4.9	70 PERCENT	113	38	6.0	4.4	100	80	13	64	9	214	60
WILSONVILLE																									
1	SLM	41	34	1.09	47	4.5	83	23	6.4	2.9	2	4	5.5	100 PERCENT	108	36	6.4	4.4	110	80	9	44	5	204	57
GEORGIA																									
BOSTWICK																									
1	SLM LT SP	42	34	1.03	46	4.5	90	22	5.3	3.7	2	4	7.0	100 PERCENT	103	33	5.7	4.2	90	70	11	72	9	164	56
SOUTH CAROLINA																									
MAYESVILLE																									
1	MID	31	36	1.15	44	4.4	88	22	5.4	2.2	2	4	5.3	100 PERCENT	112	38	6.3	4.3	90	60	17	102	13	486	63
SOUTH CENTRAL AREA																									
ARKANSAS																									
ALTHEIMER																									
1	SLM	41	35	1.11	45	4.5	84	24	6.5	2.9	2	3	5.5	95 PERCENT	102	34	6.0	4.3	90	70	10	36	9	274	53
DERMOTT																									
1	SLM	41	34	1.07	46	5.0	92	21	5.4	2.9	3	3	6.7	80 PERCENT	97	29	5.9	3.9	100	80	12	50	9	176	48
DUMAS																									
2	SLM	41	35	1.11	44	4.6	83	22	5.5	2.5	1	3	5.9	98 PERCENT	104	32	6.3	4.3	110	90	8	46	6	154	51
EUDORA																									
2	SLM	41	35	1.14	48	5.1	86	24	6.5	3.2	2	3	5.7	100 PERCENT	110	36	6.5	4.5	100	90	9	38	5	158	57

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification			Fiber Test Results										Processing Test Results - Carded Yarns										
No	Grade	Sample Number	Stple 32s	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprct'ns Neps/M Yards		Spin. Potent- tial	
				2.5% span	Unif.		Zero	Gage			G/tex	Pct		No	No	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	No		No
SOUTH CENTRAL Continued																							
KEISER																							
2	SLM	41	35	1.12	44	3.9	79	20	6.2	3.0	1	3	5.0	100 PERCENT	98	31	6.5	4.5	90	80	9	1/ (40) 8 (148) 57	
LEACHVILLE																							
2	MID	31	35	1.12	45	4.5	86	22	5.8	2.3	1	3	5.7	100 PERCENT	102	32	6.3	4.5	90	70	11	(62) 9 (208) 50	
MARION																							
1	SLM LT SP	42	35	1.14	46	4.5	81	22	7.0	3.9	3	3	7.9	100 PERCENT	105	36	7.0	5.0	80	70	20	(90) 14 (300) 53	
TRUMANN																							
1	SLM	41	35	1.10	46	4.9	87	23	6.2	3.5	2	3	6.0	100 PERCENT	105	35	6.0	5.3	90	70	23	(124) 17 (400) 49	
LOUISIANA																							
LAKE PROVIDENCE																							
1	LM PLUS	50	35	1.09	44	4.7	98	23	4.5	5.5	2	2	6.6	100 PERCENT	101	32	5.4	4.8	90	70	18	(74) 14 (318) 48 1	
MONROE																							
1	SLM	41	35	1.12	47	5.0	84	25	6.4	2.5	2	3	6.2	100 PERCENT	105	34	6.5	4.5	90	80	14	(42) 10 (288) 50	
OAK RIDGE																							
1	SLM	41	35	1.08	46	4.9	92	23	5.3	2.6	2	3	5.5	100 PERCENT	100	33	5.5	4.6	120	90	7	(20) 8 (248) 53	
PIONEER																							
1	SLM	41	34	1.06	47	4.6	89	24	6.6	2.9	2	4	5.6	100 PERCENT	104	33	6.5	4.5	110	80	5	(20) 5 (108) 51	
SHREVEPORT																							
1	SLM	41	34	1.05	46	5.3	89	24	6.1	2.6	2	4	6.5	80 PERCENT	90	28	5.2	4.2	100	70	12	(68) 12 (174) 42	
SITCILY ISLAND																							
2	SLM LT SP	42	35	1.10	47	5.2	85	23	5.4	4.7	3	4	6.9	100 PERCENT	95	29	5.7	4.0	110	80	13	(56) 10 (162) 47	
MISSISSIPPI																							
BELZONIA																							
1	LM	51	35	1.11	46	4.2	85	24	6.3	4.8	2	3	6.6	100 PERCENT	113	38	6.9	4.9	100	70	4	(24) 7 (180) 62	
CLARKSDALE																							
1	LM	51	35	1.11	46	4.7	84	23	5.9	4.7	2	3	6.9	100 PERCENT	107	35	6.5	4.7	100	90	12	(64) 7 (174) 46	
DUNCAN																							
2	SLM	41	35	1.10	45	4.8	88	23	6.3	2.8	1	3	6.1	100 PERCENT	106	34	6.5	4.6	100	70	11	(50) 7 (176) 56	
GLENDORO																							
1	LM PLUS	50	35	1.10	47	4.9	91	23	5.3	4.2	1	3	6.0	100 PERCENT	105	35	5.6	4.4	90	80	10	(32) 8 (156) 52	

Table 3.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
No	Grade	Name & Code	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S. A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Potent- ial		
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		Lbs	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	No		No	No
SOUTH CENTRAL Continued																								
GREENVILLE				1/																				
1	SLM	41	34	1.08	45	4.5	92	24	5.4	3.9	2	3	7.5	100 PERCENT	107	36	5.8	3.8	110	80	13	(16)	10 (172)	47
GREENVILLE				100 PERCENT																				
1	SLM	41	34	1.13	46	4.7	88	24	6.8	2.6	2	3	5.3	100 PERCENT	110	37	6.5	4.7	120	90	7	(28)	8 (152)	61
LULA				100 PERCENT																				
1	LM	51	35	1.11	44	4.2	83	23	5.7	5.2	3	2	9.3	100 PERCENT	101	32	6.2	4.2	100	70	12	(50)	11 (302)	46
MORGAN CITY				100 PERCENT																				
1	LM	51	35	1.12	46	4.7	87	23	6.5	5.2	3	3	7.0	100 PERCENT	111	38	6.5	5.5	90	80	13	(94)	12 (358)	59
SARDIS				80 PERCENT																				
1	SLM	41	35	1.12	44	4.1	89	23	5.6	3.4	1	3	7.7	102	33	5.8	4.5	90	70	11	(42)	9 (200)	51	
SCOTT				100 PERCENT																				
2	SLM	41	34	1.10	44	4.3	94	24	5.7	3.5	1	3	6.2	111	37	6.0	4.5	100	80	10	(36)	7 (150)	59	
SHAW				100 PERCENT																				
1	LM	51	35	1.09	46	4.9	86	24	5.3	4.1	3	3	7.8	99	31	6.0	4.0	110	70	19	(68)	13 (154)	48	
TRIBETT				100 PERCENT																				
1	LM	51	34	1.10	45	4.7	94	21	4.4	2.8	4	3	6.0	98	32	5.0	3.5	100	80	7	(26)	5 (132)	51	
2	LM	51	35	1.11	44	4.5	92	22	4.3	3.1	3	3	7.1	100	31	5.4	3.5	110	90	7	(36)	7 (148)	47	
MISSOURI				90 PERCENT																				
HORNERSVILLE				90 PERCENT																				
2	SLM	41	35	1.10	45	4.5	81	23	6.4	2.8	1	3	5.4	108	36	6.7	4.7	80	70	17	(104)	16 (288)	57	
TENNESSEE				80 PERCENT																				
ALAMO				80 PERCENT																				
1	MID	31	33	1.04	46	5.0	87	22	5.9	2.3	2	4	6.0	98	30	5.8	4.2	100	80	15	(46)	11 (208)	46	
2	MID	31	33	1.05	46	5.2	86	22	5.7	2.0	2	4	5.7	97	30	6.0	4.5	110	70	14	(66)	9 (186)	46	
BROWNSVILLE				75 PERCENT																				
1	SLM	41	34	1.05	46	4.7	88	22	5.5	2.6	2	4	6.3	106	34	6.2	4.2	90	70	13	(46)	9 (186)	49	
ELORA				90 PERCENT																				
1	SLM	41	34	1.07	45	4.6	83	23	6.2	2.9	2	4	5.3	99	32	6.5	4.6	100	70	9	(30)	7 (150)	47	

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 3.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns														
Sample Number & Grade Name & Code				Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct's Neps/M Yards		Spin. Poten- tial						
				2.5% span	Unif.		Zero Gage	1/8" Gage			No	Yes		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	Yes	No	Yes	No	Yes		
No				Stple	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	Yes	Lbs	Pct	Pct	No	Yes	No	Yes	No	Yes					
SOUTHWEST																												
SOUTH TEXAS																												
CORPUS CHRISTI																												
3	SLM	LT	SP	42	33	1.04	43	3.9	83	22	TAMCOT SP37	6.0	3.0	3	4	7.6	95 PERCENT	97	31	6.2	4.0	90	70	11	1/	10	(192)	45
GANADO																												
3	SLM	LT	SP	42	34	1.07	46	4.3	89	23	DPL 16	6.2	6.1	2	3	7.1	95 PERCENT	106	35	6.4	4.7	90	70	19	(56)	12	(198)	55

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1978.

Production Area, Classification Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns													
No	Grade		Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns Neps/M Yards		Spin. Poten- tial					
	Name & Code	32s		2.5% span	Unif.		Rdg	Mpsi			Zero Gage	1/8" Gage		Pct	Pct	No	No	Pct	Lbs	Lbs	Pct		Pct	No	No	No	No
SOUTHEAST AREA																											
ALABAMA																											
HOLTVILLE																											
1	SLM	41	35	1.13	47	4.9	87	26	5.3	2.9	3	4	7.9	111	36	5.7	4.2	110	090	12	(22)	10	(122)	55			
												*	17.9	135	47	6.2	4.7	120	110	4	(40)	3	(178)	1/			
PIEDMONT																											
1	MID LT SP	32	34	1.11	45	4.6	81	24	5.2	2.3	2	4	6.4	112	38	6.2	4.4	110	090	8	(20)	5	(82)	61			
												*	15.5	132	45	5.8	4.7	130	110	2	(8)	1	(86)				

1/ Parentheses indicate the neps per 1000 yards of yarn as measured by the Uster instrument.

* Comber Waste and Combed Yarn Data

